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AFRL awards small business contracts in support of JSF

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WRIGHT-PATTERSON AIR FORCE BASE, Ohio —- The Air Force Research Laboratory awarded five Small Business Innovation Research (SBIR) contracts in support of emerging Joint Strike Fighter (JSF) engine technologies.

AFRL's Materials and Manufacturing Directorate, Manufacturing Technology Division's Processing and Fabrication Branch awarded the Phase I SBIR contracts in an effort to enhance Pratt & Whitney F135 and GE-Rolls-Royce F136 engines.

"Bringing together five separate companies, along with the engine manufacturers, under one program was a combination of planning and funding opportunities, along with effective customer coordination," said Steve Medeiros, a materials research engineer.

Advanced engine designs for the F-35 JSF program pose many manufacturing challenges. The companies who received SBIR contracts will work with the support of Pratt & Whitney and GE-Rolls-Royce to enable the production of advanced and affordable manufacture of advanced turbine engine components.

According to the contract, Extrude Hone, of Erwin, Pa., will demonstrate the ability to laser drill cooling holes in thermal barrier coated turbine engine blades using SuperPulse™ short-pulse laser technology. Mikro Systems of Charlottesville, Va. and FOPAT, LCC of Dayton, Ohio, will develop casting technologies that will improve dimensional tolerances and cycle time. FOPAT, LLC will show viability of a polymer process to manufacture patterns for investment castings to replace wax in the lost wax process.

Maverick Corporation of Blue Ash, Ohio and Adherent Technologies of Albuquerque, N.M.,have been contracted to develop organic matrix component technologies which will result in an aircraft weight savings.

These program awards resulted from a study by the Manufacturing Technology Division to identify the costs and cycle time drivers in advanced engine manufacturing. **@**